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ABSTRACT

This paper focuses on the role of the school leader as motivator. In particular, attention is given to what those in school leadership roles can do to enhance the personal investment of students in learning. A conceptual model is outlined which suggests that school leaders affect not only the degree, but also the quality of student motivation by influencing the "psychological environment" of the school. A program of research is described that explicates that relationship and demonstrates the validity and utility of the model. Special attention is given to the definition of "psychological environment" and to specifying its antecedents and consequences. Field studies at both the elementary and middle school levels are described to illustrate how leaders can work on the school environment in a way that will influence student motivation. Building especially on the preliminary results of these field studies, specific implications for practice are discussed. (Contains 69 references.) (Author)

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School Leadership and Education Reform

OP #9

School Leader As Motivator

by Martin L. Maehr, Carol Midgley, and
Timothy Urdan

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SCHOOL LEADER AS MOTIVATOR

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Abstract

This paper focuses on the role of the school leader as motivator. In particular, attention is given to what those in school leadership roles can do to enhance the personal investment of students in learning. A conceptual model is outlined which suggests that school leaders affect not only the degree, but also the quality of student motivation by influencing the "psychological environment" of the school. A program of research is described that explicates that relationship and demonstrates the validity and utility of the model. Special attention is given to the definition of "psychological environment" and to specifying its antecedents and consequences. Field studies at both the elementary and middle school levels are described to illustrate how leaders can work on the school environment in a way that will influence student motivation. Building especially on the preliminary results of these field studies, specific implications for practice are discussed.

School Leader as Motivator[1]

by

Martin L. Maehr, Carol Midgley, and Timothy Urdan

These are turbulent times for schools. There are daily calls for reform, renewal, or restructuring (e.g., Cuban, 1990). There are regular reports on how the calls are being answered or ignored (e.g., Chira, 1991). There are fears that today's answers may be tomorrow failures (Sarason, 1990). And, as is so often the case, there is a tendency to place these problems at the feet of the leaders with a succinct demand: DO SOMETHING!

But what can a leader do? Our answer is simple and direct: The leader can motivate. For a school to be effective, it must elicit the best efforts of all those concerned; the "bottom line" is the investment of children in learning. While school leaders play multiple roles (cf. Sergiovanni, 1990), none is more critical than the one that is the subject of this article: School Leader as Motivator (cf. Gardner, 1990). As self-evidently important as the leadership-motivation connection may be, there has been surprisingly little systematic study of *how* leaders can elicit motivation. Generally speaking, the literature reflects a greater interest in motives, beliefs, and personal predilections of leaders than on how leaders can enhance the motivation of followers (e.g., McClelland & Boyatzis, 1982). Indeed, it is interesting and curious that to this point the literatures on motivation and leadership have for, all practical purposes, gone their own and separate ways. A notable exception is to be found in the work of Sergiovanni (1990), but Sergiovanni focuses primarily on the motivation of school staff and only indirectly on how this translates into student motivation and learning.

This article is based on the assumption that leadership and motivation are more than incidentally related. Indeed, we will argue that school leaders play an important role in determining the personal investment of students. More than argue, we will describe a program of research that demonstrates how they can play this role.

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[1]This report appears in a special issue, *Educational Administration Quarterly*, Volume 18, No. 3, August 1992.

A PERSPECTIVE ON LEADERSHIP

Our program of research leads to the proposal that school leaders can and do impact student motivation by influencing the learning environment of the school. While others (e.g., Deal & Peterson, 1990; Hallinger, Bickman & Davis, 1990; Heck, Larsen & Marcoulides, 1990) have noted the effects that school leaders can have on the climate or culture of the school, and to some extent, on student outcomes, our proposal takes a specific form and is complemented by operational detail. Building on organizational (e.g., Kilmann, Saxton, Serpa and Associates, 1985; Schein, 1985) and motivational (e.g., Ames & Ames, 1989; Maehr & Pintrich, 1991; Pervin, 1989) theory we suggest that leaders motivate students by influencing a critical facet of school climate or culture: the definition of the purposes and goals of learning. To call attention to this distinction we use the term "psychological environment of the school." In this article we will not only describe a set of relationships which have basis in research (cf. figure 1), but present preliminary findings regarding how leaders can and do affect the psychological environment by inaugurating, supporting, and maintaining certain school-wide policies, practices, and procedures. Their action or inaction inevitably determines how students will define the purpose of what happens in the course of a school day, year, or lifetime. The effects likely reach beyond school experience to determine enduring meanings of learning.

Figure 1: Leadership--->Psychological Environment--->Motivation

Goals and Purposes

Recently, research on motivation and school achievement has concentrated especially on the role of purposes and *goals* in determining the nature and degree of student investment in learning (Ames & Ames, 1989; Dweck, 1985; Maehr & Pintrich, 1991; Nicholls, Cobb, Wood, Yackel, & Patashnick, 1990; Nicholls, Cheung, Lauer, & Patashnick, 1989; Pervin, 1989). This work has revolved especially around two contrasting types of goals: "task-focused" and "ability-focused." Given an ability focus, children will be concerned with being judged able (or avoiding being judged not able), with ability being evidenced by outperforming others, or by achieving success even when the task is easy. In contrast, with a task focus, the goal of learning is to gain understanding, insight, or skill; to accomplish something that is challenging. Learning in and of itself is valued, and the attainment of mastery is seen as dependent upon one's effort.

Whether children are oriented primarily to one goal or the other has dramatic consequences for whether they develop a sense of efficacy and a willingness to try hard and take on challenges, or whether they avoid challenging tasks, giving up when faced with failure (Ames, 1984; Elliott & Dweck & Leggett, 1988; Maehr, 1989; Nicholls, 1984). Children's goal orientation has been shown to predict their use of effective learning strategies. Children with a task orientation tend to use deep-processing strategies, including discriminating important from unimportant information, trying to figure out how new information fits with what one already knows, and monitoring comprehension. Children with an ability-focus tend to use surface-level strategies, including rereading text, memorizing, and rehearsing (Golan & Graham, 1990; Meece, Blumenfeld & Hoyle, 1988; Meece & Holt, 1990; Nolen, 1988, Powell, 1990). Deep processing is more likely than surface level processing to lead to understanding and retention of meaningful material (Anderson, 1980; Entwistle & Ramsden, 1983). Finally, there is also preliminary evidence that the adoption of a task goals is associated with greater creativity (Archer, 1990). In brief, goal orientation is known to play a profoundly important role in the determination of the nature and quality of student motivation and learning.

Goals and The Learning Environment

That goals play such an important role is indeed important. Equally important is the increasing recognition that characteristics of the learning environment influence the learning goals that students adopt. Implicit within any given learning environment is a differential stress on these two goals, a stress which affects how students approach learning. Thus recent research indicates that classrooms vary in how learning is defined, and that these definitions affect the goals that students adopt, thereby influencing their motivation and learning (Ames & Archer, 1988; Meece, Blumenfeld, & Hoyle, 1988; Nicholls, et al, 1990; Nolen & Haladyna, in press; Pintrich & DeGroot, 1990; Pintrich & Garcia, 1991; Powell, 1990).

Parallel to research at the classroom level, research on school climate and culture indicate that *schools as a whole* reflect different goal stresses. (Maehr, 1991; Maehr & Fyans, 1989; Maehr & Midgley, 1991; Maehr & Buck, in preparation; Krug, 1989; in press - this issue). Just as the smaller unit of the classroom has found to define learning, it now appears that the larger unit of the school may likewise define learning and therewith have a pervasive influence on student motivation. Indeed, that goal stresses in the school as a whole may exist and may have influence is a singularly important finding. Although

students are exposed to different classrooms and a variety of curricular and co-curricular experiences, they are exposed to pervasive school wide influences. And those in positions of leadership need to concerned about how these school-wide effects relate to motivation and subsequently to achievement.

CHANGING SCHOOL LEARNING ENVIRONMENTS

Given the evidence that differential stresses in task and ability goals affect motivation and learning, a number of questions come to the forefront. What happens in a school context that eventuates in a greater stress on task and lesser stress on ability goals? Are these antecedent factors amenable to change? How do leaders effect such change? Answering these questions is a crucial next step in our program of research. That next step is underway. A progress report follows.

In order to develop an understanding of the origins and antecedents of the psychological environment of schools, and to determine whether or how these can be changed, we initiated two field studies in collaboration with a local school district. An elementary and a middle school were selected as "demonstration" schools and two schools in the same district were selected as "comparison" schools. The district serves a largely blue-collar population, with many of the parents in the district employed by the automotive industry and is affected significantly by the economic fortunes of this industry. Currently, 16% of the students are Black, and 37% of the students qualify for the free or reduced fee lunch program. As is true in many area communities, this district has had difficulty passing millage issues and has been engaged in serious and prolonged contract disputes. Individual teachers often exhibit creative approaches to instruction, but most would describe the curriculum, organization, and design of these schools as "traditional".

The project was described to school leaders and staff as a collaborative effort in which a School-University coalition would examine school-wide policies, procedures, and practices and attempt to change those which militated against a focus on task goals. School staff, of course, were to play a major role in deciding what changes would be attempted and how such attempts would be managed. University staff primarily provided a framework for evaluating policy and practice options, interpreting them in terms of likely implications for the psychological environment and student motivation and learning.

Two features of this process merit special comment. First, the intervention was designed to engage the staff as a whole in the process - but the focus of change was to be in the hands of a school leadership team. Thus, the collaboration required the participation of not only the principal or an administrator, but teachers as well. Our entering bias was that for school-wide changes to occur, both teachers and administrators must accept and believe in the endeavor (cf. Rowan, Raudenbush, & Kang, 1991).

Operationally, the collaboration has proceeded as follows. Each week a group from the university, consisting of two faculty members and six graduate students, meets for a least one hour with leadership team of each school. At the elementary school, the leadership team consists of the principal and members of a previously organized school improvement team. The leadership team at the middle school consists of the assistant principal and a core group of five teachers, although we often have as many as ten teachers at the meetings.

It is noteworthy that during the course of this first year, the school leadership team increasingly sought out their own ways to evaluate the current state of affairs and make plans for change. With information provided by the university group, leadership team members from both the elementary and middle schools visited other schools and programs. Both also invited outside experts on specific topics to present a case for one or another programmatic option. In all cases, these were staff members from other schools or school districts and the focus was on the question of how one actually *does* something. The middle school staff held a special retreat on a selected Saturday, which they attended without reimbursement. The elementary school devoted several in-service days to options under discussion. In both the elementary and secondary schools certain staff members, including teachers who were not on the leadership team, began meeting on their own time to develop plans for specific programmatic action. In short, it is currently no longer a process in which a School-University committee is doing the evaluating, the planning, and the acting. The School-University coalition has become the forum for coordinating what's happening; it is a kind of hub around which the action revolves, but the action is clearly happening elsewhere, in various small groups and in late afternoon meetings in classrooms, over the phone, and over coffee on the weekend---as one would hope.

The focus of the effort from the research team's standpoint is of course to learn whether or how the school psychological environment can be changed, thereby also learning more about the origins and antecedents of such environments. From the school district's

perspective, the goal is primarily one of effecting change that will eventuate in the enhancement of student motivation and learning, especially that of at risk students. The convergence of interests lies especially in the fact that there is strong theoretical reason to believe that a school psychological environment that stresses task rather than ability goals will eventuate in the outcomes sought by the school. Therefore, the joint purpose is to examine school policies, practices, and procedures as variables that affect the school psychological environment and student investment in learning. Specifically, the focus is on changes that might enhance the stress on learning, understanding, and problem solving, and minimize the stress on relative ability and comparative performance in the school.

But how does one affect goal stresses? Fortunately, there is a body of research that suggests a possible direction, if not a clear course of action. Research broadly directed toward enhancing student motivation at the classroom level (e.g., deCharms, 1976; Brophy, 1987) was helpful. But the primary base for our efforts was a growing literature which demonstrates more specifically how classroom practices and strategies increase students' perceptions of a task (or ability) focus, and thereby affect their motivation and learning (see e.g., Ames, 1990; Mac Iver, 1991; Meece, 1991; Nicholls et al., 1990). With some reason to believe the school wide practices and policies might have analogous effects (cf. Braden & Maehr, 1986; Maehr, 1991; Good & Weinstein, 1986), we proceeded to hypothesize that one could increase the stress on task and decrease the stress on ability by 1) providing meaningful, challenging, contextualized tasks; 2) giving students an increased sense of control over their schooling through choice and decision-making opportunities; 3) recognizing students on the basis of their progress, effort, and improvement rather than on their performance compared to others; 4) grouping students heterogeneously and on the basis of interest rather than on the basis of relative ability; 5) using evaluation as a way to provide helpful feedback to students rather than to tell them how they compare to others; 6) allowing all students, regardless of their academic ability or attitudinal disposition, equal access to school resources, both tangible (e.g. computers, lab equipment) and intangible (e.g., participation in extracurricular activities); and 7) allowing some flexibility in how teachers and students use time during the school day to allow for innovative, interdisciplinary instruction and the pursuit of interests.

In summary, we identified seven areas that school leaders could examine in attempting to affect the psychological environment of the school. In the following sections we describe these areas of school activities in greater detail, illustrate their importance for student motivation, and suggest how leaders can promote a school wide task focus.

ANTECEDENTS OF THE SCHOOL LEARNING ENVIRONMENT

Research by ourselves and others, discussions with the teachers and administrators at the two demonstration sites, and informal observations of the daily practices at these schools have given us insights into the dimensions of the school environment that influence the goal stresses in schools. Moreover, preliminary evidence gives us confidence that what happens in these areas is critical to the definition of the learning environment of the school.

The Nature of Academic Tasks

Academic tasks are increasingly recognized as a critical element in the school environment (Brophy & Alleman, 1991; Blumenfeld, Mergendoller, & Swarthout, 1987). Current reform efforts stress the need to move towards curricula that emphasize contextualized tasks and active learning rather than discrete facts and rote learning (Murphy & Beck, in press). The types of tasks that students undertake in the classroom can, in large part, determine the types of goals they will pursue and consequently their level of investment in school. For example, students can be given tasks that are relevant to their lives and require creative thinking and problem solving, or they can receive a daily dose of drill-and-practice dittos. In the former case, students are likely to value the task, adopt task-focused goals such as mastering the material, and be intrinsically motivated to do the task. In the case of the latter, students may perceive that the purpose of the task is merely to keep them busy, place little value on the activities involved, and adopt ability-focused goals such as looking smarter than their peers, leading to the use of surface-level strategies like finishing their work quickly regardless of the quality.

How one defines any course of study for students is in part determined at the school level by school leaders. Heck, et al. (1990) found that one of the defining characteristics of effective principals was their direct involvement in decisions about curriculum and instructional strategies. School-wide resources and attention can be invested in activities that challenge students, stimulate the use of higher order thinking skills, and engage their intrinsic interest. School policy--*and* school leaders--can stress strict adherence to textbooks or encourage teachers to think broadly and creatively about academic tasks including: interviewing knowledgeable persons, surveying constituencies, providing hands-on and project-oriented activities, allowing for independent study, facilitating field

trips, and countless other possibilities. Teachers can be given (and expected to use) "teacher proof" materials, such as certain texts, worksheets, and pre-planned exercises---or be given the freedom to design and use tasks that are action-oriented, that flow from the interests of the students, and that are challenging and creative (cf. Meece, 1991). Indeed, as Hallinger, Bickman, & Davis (1990) suggest, it may be that one of the most powerful ways school leaders shape the environment of the school is by encouraging teachers to take risks and be creative in designing instructional tasks.

The point is that teachers, alone, do not decide what students do in the classroom. These decisions are also made in direct and subtle ways by school leaders when curricular issues are discussed and decided, teachers are recognized for their work, news reports are filed, textbooks are chosen, state mandates are interpreted, inservice training is planned, and resources are allocated. Everyday decisions by school leaders, their implicit and explicit gestures, their action or inaction, the content of their communication to the central administration and to parents define the range of learning activities that will be made available to students. Thereby they also affect the psychological environment of the school and influence the operative meaning and purpose of learning for students.

Opportunities for Student Initiative and Responsibility

Fundamentally, task goals are rooted in the proposition that doing the task, in and of itself, is the source of motivation. When one demands that someone do something and uses external force or extrinsic rewards to insure conformance, one may change the meaning of the task to the person doing it; one runs the risk of undermining the perception of its intrinsic worth. Thus, it is not surprising that motivation research has considered perceived choice as a critical variable affecting a task goal orientation and intrinsic motivation (Ames, 1990; Hackman & Oldham, 1980; Deci, 1975; Deci & Ryan, 1985). It seems reasonable to assume that schools vary in the degree to which their students perceive themselves as having choice over what and how they will learn. There is evidence, for example, that students perceive that they have more opportunities for choice and decision-making in elementary schools than in junior high schools (Midgley & Feldlaufer, 1987). It also seems reasonable to assume that these perceptions are related to school-wide policies and practices, which are at least partially under the control of school leaders. We have preliminary evidence that this line of reasoning has validity.

Schools can vary in the degree to which students are given a voice in what happens in school, from the courses they take to the tasks they work on in those subject matter areas, to their participation in student government and other activities. School leaders, through their influence on school-wide rules and guidelines, can focus on controlling behavior by putting limitations on students and developing rules to control students, or they can develop ways to give students more choice, initiative, and responsibility. A safe and orderly environment for learning can drift into a coercive and stifling environment. Long ago, John Dewey emphasized that the classroom can be an important precursor for participation in a democratic society. That is doubtless correct, but to that we add that participation in decision-making by students leads to views of the nature of the school's mission, it relevance to their lives, and the intrinsic worth of learning (cf. Nicholls, 1989).

Recognition

Recognition consists of at least three parts. One part is *what* is recognized. Honor rolls, which typically recognize students for getting higher grades than other students, fail to recognize other important accomplishments such as improvement, sustained effort, or mastering difficult tasks. Therefore, the message is sent to students that high grades (which only a few students have a reasonable chance of achieving) are more important than improvement, a goal all students can strive for. Another part, of course, is *who* is recognized. When one recognizes academic achievement in a socially competitive fashion, there are some who will seldom, if ever, be recognized, and are therefore not likely to be motivated by such rewards. The third part is <u>how</u> students are recognized. One program we have encountered rewards students for good conduct by letting them skip fifteen minutes of their most dreaded class. This type of reward sends a very negative message to the student about the school and learning.

Research at the classroom level has repeatedly called attention to the problems created by such a unidimensional, indeed misplaced, attention to recognition and reward (e.g., Ames, 1990). But there is reason to believe that schools and school leaders have a major role to play in this regard as well. An example or two from our work may make the point. In working with teachers to encourage recognition on the basis of progress, improvement, and effort---and thereby foster a task-focus in their classrooms-it was pointed out to us that our efforts were being undermined by a highly visible school practice. The school in question prominently displays the names of honor roll students who are recognized for high grades. Teachers are the first to admit that grades are closely tied to the entering

ability of students. There students receive special attention (honor roll assemblies) and special privileges (raising and lowering the flag, acting as guides at school functions, etc.). Of course, it was virtually predetermined that some students would regularly appear on the honor roll; others would just as regularly never be so recognized, regardless of effort put forth. There was no "personal best" award as one commonly finds in the presumably competitive world of business. The honor roll was the overwhelmingly dominant instrument for recognizing students and for defining what the school was about. It was not a very effective instrument in defining the intrinsic worth of learning for all regardless of ability or place in society. Moreover, school leaders initiated it and promulgated it.

Some administrators have actively sought school-business partnerships which focus on student recognition, presumably for achievement. One of the more popular among these is a program sponsored by a pizza chain. This well-meaning effort rewards students --- with pizza, no less --- for the number of books they read. Students compete with each other, recognition is on the basis of relative ability, and the difficulty or challenge inherent in the task is ignored. Teachers tell us that some students don't even try, some cheat, and most read the easiest, shortest books they can find. As such, children participating in the program are unlikely to develop what we have termed a task goal orientation. Rather, as John Nicholls has put it, we are most likely to end up with a lot of fat kids who hate reading.

Returning to the central point, it should be clear that administrators can and do affect how learning is perceived in the school through the recognition practices they promote or accede to. School leaders can in the first instance undermine the efforts of individual teachers to promote a facilitative learning environment, but it appears that they can do more than that; they can actually affect the overall psychological environment of the school. By sponsoring programs or policies that publicly reward students for outperforming their peers, the message is sent to students and parents that relative ability is more important than mastering the task.

Grouping

The practice of grouping students together homogeneously according to their ability level is widespread. Ability grouping within classrooms is common at the elementary level, while assigning students to classes on the basis of their ability is common in middle level schools, particularly in mathematics. There is reason to believe that the resultant grouping sends powerful messages to everybody involved in the educational process, particularly students (Oakes, 1981). Students assigned to low ability groups or classes are well aware that they are considered inferior to students in higher ability groups. As one teacher we work with put it, "The kids in the 'Basic' classes (the low ability track) know they are in the 'dummy' group." The practice of ability grouping sends the message that relative ability is an important element of the school, and promotes in students and teachers alike a focus on relative ability. It encourages the emergence of a learning environment which stresses ability and minimizes task as the appropriate focus of school activities.

Besides the message that homogeneous ability grouping sends to parents, teachers, and students, there are other very practical consequences that must be considered. We have often heard teachers speak of their dread of teaching low ability classes. These feelings on the part of teachers reflect potentially harmful expectations that my inhibit effective teaching (Oakes, 1981). In addition to such negative feelings on the part of teachers, there is the fact that as students are grouped, different resources are assigned. Consider a specific example in this regard. We have often observed that computer usage is not broadly distributed across students. *Who* gets to use the computers and *for what* may effectively state what the school thinks about who can achieve and what that achievement is worth. Higher level groups and classes may be encouraged to use the computer for desk top publishing, for simulations, for programming, and for complex problem solving. Students in lower level groups typically use drill and practice software that gives them immediate feedback but fails to either motivate them or to develop higher order thinking skills. Similarly, project-based science may be reserved for those in the advance groups. Again, there is a message here. All children can presumably profit from seeing the relevance of science and technology in their daily lives. Opportunities to use science in the course of learning science should not be the province of an elite few--if learning, not just competitive performance, is the preeminent goal of the school. In short, school grouping policies and practices convey a message regarding the purpose of teaching-learning. They very likely also influence what we have termed the psychological environment of the school and thereby affect how invested students will be in learning.

The very pervasiveness and apparent influence of ability grouping practices make it evident that they should be attended to by those who are interested in school learning environments. Further, this appears to be an area in which school leaders can make a difference. With the many negative effects that ability grouping has for students, some have argued that school leaders have a responsibility as social architects to do away with the practice (Murphy & Beck, in press). While strong opinions in this regard are often held by teachers, school leaders typically can and do exert considerable influence over policies that encourage or discourage homogeneous grouping. In secondary schools, the leadership typically decides whether or not classes will be organized on the basis of ability. The schedule is then designed with this decision in mind. School leaders can encourage thoughtful discussion about the pros and cons of ability grouping by providing materials to teachers or through inservice training. At the very least, they can and should examine precisely how resources are assigned to different groups.

Evaluation Practices

A large body of literature is available on the effects of evaluation practices on student motivation and learning (Covington & Omelich, 1987a, 1987b; Hill, 1980, 1984; Hill & Wigfield, 1984; Mac Iver, 1990). Briefly summarized, the findings indicate that these practices are fraught with possibilities for encouraging students to approach academic tasks as competitive contests to see who is the smartest and the best. Focusing as they do on outcome and performance, regardless of the place at which the learner starts, many evaluation practices are likely to suggest that the purpose of learning is to define relative ability rather than to assess the individual's progress in mastering a particular skill or acquiring certain knowledge. Investing in the task for learning's sake, to understand, to gain new knowledge and skill is probably undermined by typical evaluation practices. Evaluation practices can and often do define the name of the game as one in which some win and others lose. And, too often they define some students as perpetual and inevitable losers.

Evaluation practices are critical factors in what we term the psychological environment of the school. While evaluation is a part of schooling, it is practiced in different ways and given different emphases. By what we choose to evaluate, how we do it and interpret what we do, we make important statements about the purpose of schooling. Some schools focus on effort put forth and on student progress. Some view evaluation as diagnosis leading to the development of goals and plans for improvement. Other schools

are apparently quite proud of letter grades that sort out the able from the less able, perhaps as early as the primary grades.

No perfect system of evaluation has yet been devised, but clearly schools approach the issue quite differently and there is reason to believe that this is one of those areas in which leaders can influence the psychological environment of the school. While many evaluation decisions occur at the classroom level, these decisions may be heavily influenced by school leaders. At the very least, decisions are made at the school level about reporting to parents. In addition, school leaders can influence classroom level practices by advocating certain evaluation practices (e.g., inservices) for teachers to learn about alternative forms of evaluation. But perhaps the role of a school leader relates especially to how evaluation is treated at the school level. Our own preliminary judgment is that in fact a great deal of significant control does exist at the school level. Most of the interpretation of evaluative information (standardized test, for example) occurs at the school level. Certainly, the recognition that often is associated with such evaluation is initiated at this level. Giving tests may not be a debatable issue; assigning letter grades may also be a policy set in stone. Yet, the school does at the very least provide an interpretative patina. It constructs meaning around these practices; it interprets what they mean for students, and thus affects how students perceive learning and schooling and how they feel about themselves.

Resources

Budgets reflect goals; expenditures reflect values. What an organization believes and wants to do is reflected in the way it utilizes its resources. The more obvious use of resources involves what can be directly bought: computers, texts, science equipment, library books. But in a more subtle and no less important way it also includes intangibles such as inservice activities, retreats, camping experiences, extracurricular activities, school parties, and student government. A first point is that schools differ not only in total amount of resources, but in the configuration of resources. Even within the bounds of extensive external regulation and policy definition, schools purchase different things in different amounts. They also distribute their resources in different ways. These points are obvious to any knowledgeable observer. What may be less obvious is that the array of resources purchased as well as the way they are distributed reflect the psychological environment of the school. Our earlier example of the access to computers is relevant here, of course. But examples from a different realm may broaden the points at issue. Many schools have policies which prohibit some students (usually low-achieving students)

from gaining access to school activities by establishing ability standards as admission criteria. Such policies create an environment which emphasizes that relative ability is the "coin of the realm." By making participation in some activity contingent on an ability standard, ability rather than task goals are stressed.

Those in leadership roles are called upon to manage these resources. They do not have unlimited freedom in the resources they obtain and how they distribute them, but they do have choices. Heck, et al. (1990) found that one hallmark of effective principals is that they allocate resources for inservices and instructional materials. We have seen administrators in relatively poor schools somehow manage to find a way to support a teacher who wants to try something new. In schools of similar circumstance, we have seen discretionary funds spent not on fostering instructional innovation, but to support advanced placement classes, to send selected students to statewide competitions, and to buy equipment that will be used by a select population in the school. Teachers and students are sensitive to how resources are allocated, particularly since most schools operate on limited budgets, and in this way come to understand what is valued and not valued in the school.

Organization of the school day

The scheduling of the school day and school activities is an important element in the determination of the psychological environment of the school. All of the previously discussed areas interlock and interact with each other in determining the psychological environment of the school, but this is most especially true in the case of scheduling. As noted earlier, scheduling influences how students are grouped. It relates to matters of student initiative and responsibility; students typically have no control over scheduling. Certain electives may be unavailable to students if the schedule is relatively inflexible. Scheduling dictates how time is to be used and how the curriculum is approached. Team teaching and interdisciplinary approaches to the curriculum are at the mercy of the schedule. Nowhere is this more evident than at the secondary school level, where the school day is typically divided into 45 minute periods in which different subjects are taught each period. With this type of schedule, teachers must design tasks which take no more than forty minutes a day. Such time restrictions necessarily limit the types of tasks that students engage in, often resulting in more rote learning tasks and fewer interesting, hands-on types of activities which are more likely to motivate students. Science teachers who wish to engage students in challenging projects quickly learn that the 40 or 50 minute

period may interrupt activities at the point of real insight. Much of the period may be spent gathering together, and cleaning up, materials. Perhaps a group of teachers would prefer to devote a whole day to math, or to integrate math and science instruction, or to capitalize on some current event or phenomenon that is in the news, but is restricted by school-wide mandates. Any teacher wishing to move instruction beyond school walls to a museum or to a garden on the edge of the school grounds will be bound by scheduling policies to some significant degree. The 40-50 minute hour is well designed to conform to the teacher lecture and to preprogrammed group activities. It is not particularly well-suited to a project approach to teaching. Indeed, it is likely to foster a didactic, teacher-oriented approach to instruction.

Changing the organization of the school day will not, in and of itself, produce a change in the psychological environment of the school. But a more flexible schedule permits a broader range of freedom and self-determination for both teachers and students. That in itself is likely to have effects on the psychological environment of the school. Furthermore, as flexible scheduling facilitates more engaging approaches to the curriculum, including interdisciplinary, project-oriented activities, and learning tasks in which the student can assume some ownership and derive personal meaning, it should eventuate in a greater stress on task goals and reduced stress on ability goals. So often we hear teachers tell us that "the schedule won't allow that" when perhaps the emphasis should be on the role of leaders in making the schedule adaptable to students and teacher needs. We only wish to suggest that scheduling is an organizational matter and thus properly under the purview of school administrators and those who play leadership roles in the school. They have choices to make and it is quite possible, indeed likely, that their choices will contribute to the character of the school in such a way that student motivation is significantly affected.

OBSERVATIONS ON THE PROCESS OF CHANGE

A first and important result of our efforts thus far has been a further specification of hypotheses regarding policy antecedents of the psychological environment of the school. But our field studies are not only concerned with the identification of school policies that school leaders might work to change. In a primary sense, they are concerned with demonstrating that changes can be made and that these changes affect student investment in learning. That purpose focuses us on the development of processes for change. In this regard, our work to date has yielded several observations which may ultimately prove

fruitful in going beyond telling leaders simple *what* to change to suggesting *how* to change. We, therefore, present the following as preliminary conclusions regarding the process of change.

The Empowerment of Teachers

We started our intervention program by requesting that we work not only with principals but with leadership teams. It is clear that we had an entering bias regarding the necessity to involve the staff as a whole in the change process. However, we have already learned much more than we expected about the importance of staff involvement in the change process. Theoretically, there are at least two reasons for engaging teachers effectively in the change process. The first is motivational. Stated simply, motivational theory suggests that people are likely to be more personally invested in their work with an organization when 1) they have a voice in what happens to them; and 2) their work has meaning and significance in contributing to a higher purpose or goal (cf. Blase, 1990; Sergiovanni, 1990). Not only does such involvement and purpose affect the overall level of motivation, it apparently also affects the quality of motivation. When teachers are treated in a way that allows them to develop a sense of self-determination and purpose, they, in turn, relate to students in a qualitatively different fashion (Ryan & Stiller, 1991). As one of the teachers working with us said, "If we are going to create a task-focused environment for students, we've got to work in one." By involving teachers in the change process, and having teachers decide what policies and practices we will examine and change, both of these motivating conditions are satisfied. The second reason for engaging teachers is a matter of harnessing the expertise teachers have and the knowledge of practice they bring to the process. Teachers, as practitioners, are simply more aware of the daily happenings in classrooms and schools than the typical researcher. We have heard too often of well meaning interventions, designed by researchers, which did not work or did not persist because the practical considerations of school and classroom life were not considered

Bartunek and Keys (1982) found, that if the appropriate conditions can be induced, teachers can be empowered to make decisions about school functioning, and this empowerment increases their feelings of satisfaction with their administrators. Our work with the teachers at the two intervention sites leads us to believe that teachers, given the opportunity, are eager to take an active role in deciding what happens in their school. We suggest, further, that empowering teachers not only enhances staff morale, it is critically instrumental to altering the psychological environment of the school as a whole.

The Critical Role of the Principal

As important as teacher empowerment is, it is our observation that it should not detract from the importance of the role of the principal. As discussed earlier, critical decisions about changes made in the schools will be made by the principal, as she is ultimately held accountable for the consequences of those changes. For a school to attempt a serious reformulation of goals, purpose, and mission and to translate these into policy, the principal must as least be open to change. It is particularly helpful if the principal is eager to take risks and try new things. She must also be strong enough to support an environment of collaboration with her teachers, thereby surrendering some of her own power (Murphy & Beck, in press). As Bartunek & Keys (1982) discovered, teacher empowerment can only occur if the principal is willing to surrender some of her customary authority to the teachers by soliciting and giving weight to their suggestions for change. This combination of risk-taking on the part of the principal, promoting risk-taking on the part of teachers, and surrendering of formal power all occurs while the principal is trying to deal with the pressures of outside influences, such as central administrators, parents, budgets, and state mandates (Heck, et al., 1990; Murphy, 1990).

In this first year we have observed how our collaborating administrators struggled with the proposals that their leadership teams put forward. We empathized as we sensed their (often unspoken) concerns about how to explain a new grouping policy to the PTO, an organization which might be expected to be pleased with ability grouping. We noted their initial resistance to discussing changes in assessment or evaluation because "central administration will never go along with that". With time, other teachers on the leadership team began to challenge these assumptions rather than simply accepting them - but they continued to believe that the principals had the final authority. Frequently they would turn to the principal and say - "Can we really do this? Is this just pie-in-the-sky?"

But we also noted a change in the principals. Just as the teachers appeared to feel empowered by the process, the principals also began to believe that changes could be made and that parents and the superintendent's office could be convinced of their merit. They still reminded teachers of constraints such as scheduling, district policies, and budgetary limitations, but increasingly they became advocates for change. One of the principals began to say to less venturesome teachers, "just try it - give it a chance - trust me." At significant times, the harder course was chosen over the easier one. Why?

We do not know the answer to that question, though we continue to pursue it. We do have reason to believe that situational factors are as important as personal factors. Granted that some principals are likely to be more venturesome than others, perhaps as a personality characteristic, but contextual features are also important. Thus, the psychological environment of the district seems to focus the principal on management in the narrow sense rather on the more venturesome course of thinking about purposes and goals which may lead to organizational transformation (cf. Smith, Maehr & Midgley, 1991; Murphy, 1990). Anecdotally, the simple statement of the superintendent to one of our principals that he would "rather see a school try something and fail than never try anything al all" seemed platitudinous when we heard it, but turned out to represent a kind of turning point in the process. It was repeated often thereafter by the principal in rationalizing new plans. Possibly it served to frame the kind of psychological environment for the principal that we hope principals and teachers are framing for students.

In sum, our observations would suggest that as critical as the staff is in the change process, leadership embodied in the principal is not to be underrated. Like teachers, principals must not only be encouraged but also empowered to make changes if changes are to occur.

The Need for Reflection

Besides empowerment, school staff interested in making changes need an opportunity to step out of their roles as teachers and administrators busy with the demands of everyday practice, and reflect about what happens in their schools. As the middle school administrator working with us put it once in a moment of frustration, "I'm simply too busy to think." School leaders need a chance to reflect, on a regular basis, on the policies, procedures, and practices that are in place in their school, and their impact on student investment before they can think of ways to change the school. The idea of the "reflective practitioner" (Schon, 1983) is one that is often voiced, but probably seldom realized in the public schools. Members of the leadership teams mentioned to us that it was difficult to give up the time for meetings, but well worth it because this type of contemplation and deliberation rarely took place in school. One of the services rendered by the inauguration of a school leadership team in conjunction with a university group was that specific time was set aside for reflection and serious dialogue--not only about what was happening in the school, but about what it *meant*. This process was initiated by researchers at a

university, but there is no reason why this could not occur through means under the control and under the purview of the school.

The Role of Models

Once school leaders have had a chance to reflect on what happens in their school and feel empowered to make changes, they can benefit especially from observing concrete examples of programmatic options such as: model programs, consultations with school staff who have initiated a given course of action, an occasional word from an expert with in-school experience. The university team played a major role in assisting the two schools in our field study in lining up opportunities for seeing how things might work in practice. We are convinced that providing such opportunities is critical. The middle school planning group appeared eager to move toward a "small house" concept, but made little progress in their thinking until they observed the program in another school and talked to the teachers who worked in the "small house" system. One of the teachers mentioned to us that she had been working at the school for 16 years and this was the first time she had visited another school to observe a program in action. Another teacher said, "How can we learn if we don't watch others?" The elementary school principal resisted allowing a group of teachers to experiment with multi-aged classrooms until she talked to fellow principals who were intrigued with the idea---and visited several schools to see how it was actually done. Taking members of the leaderships teams to various demonstration schools, arranging for in-service programs in which experts who are also fellow practitioners could describe what they did in a very hands-on way, not only provided comfort, encouragement, and inspiration, but also conveyed very practical information that teachers felt was essential to their understanding. We had heard the comment, "sounds good - but what does that mean exactly? What do you do on a day-to-day basis?" These practical, procedural questions, if left unanswered, can threaten the change process before it gets beyond the talking stage. Examples of how other practitioners are doing things is invaluable, and in many cases absolutely necessary.

The Importance of Theory

Perhaps in part because we are academics, we wonder about the role of an operating theoretical framework in fostering meaningful change. Certainly, something so important as school change ought to have a rationale and be guided by some coherent conceptual framework. The change process in which we are engaged is clearly driven by theory. It is

a framework which we found to be easily understood by, and largely compatible with, the biases and beliefs of teachers in our sample. Whether or not one accepts *this* framework, it seems appropriate to argue that what we plan to change in the school ought to be guided by and related to some system of purpose, mission, and goal. It ought to relate to a view about the nature of students and learning, and the role of schools. Administrators and staff ought to have a clear sense of what learning is about, what it is to be. Their actions should be guided by an operative theory or philosophy of education. In our case goal theory served effectively as a guiding force in keeping the dialogue about change on a meaningful and coherent path. It provided language for staff to use to discuss change as well as to understand issues. It provided questions for examining practices. It helped in fending off the introduction of various "quick-fixes." A member of one the leadership teams told us, "we need a framework to guide unified action." By the time our collaboration with these schools ends, we believe we will have gained considerable insight into the role that an over-arching theory plays in school restructuring. At this point we feel comfortable in putting this issue on the table as well.

Is an Outside Force Necessary to Effect Change?

Clearly, the change that is occurring in the schools in which we are working is associated with the initiation of a collaborative effort involving university researchers. The question that we continue to puzzle over is, what happens when we leave? What would have happened had we never come? At the heart of both of these questions is a third, overarching question: Is an outside influence, such as our university research team, necessary to get a school to make qualitative changes in the goals they stress?

With a varying degree of certainty we suggest that the several elements outlined above are critical to the change process, but we are decidedly unsure whether these change efforts require the outside push that our university research team has provided. Clearly the elements for change outlined above are not per se tied to some external forces, university or otherwise. Yet, it is equally evident that we have helped the process by getting school leaders to meet weekly and reflect on what happens in the school, by putting these people in contact with other practitioners who served as models for change, by empowering the school leaders, and by providing a theoretical framework to guide thinking about change. It is not clear whether we were a necessary element in the process. It is possible that with the right leader, one who is willing to organize a leadership team yet also willing to surrender some of her power to that team, this process could have occurred without us?

If not, then will the whole process that we have started crumble when we leave at the end of three years? We think not, but this is a critical issue that must receive further attention.

CONCLUSION

Our story, of course, is a continuing one. What we have provided is a snapshot of what we see at the moment and a guess or two about what we might see at some future point. We trust that we have done more than present a plausible argument that school leaders not only should but can do something about the personal investment of students in learning. We believe that we have at least suggested a framework that will reveal how they can best do that. Indeed, a touch of boldness allows us to suggest that at this early date we have shown how action might logically follow from the theory and research in which we are engaged. On that note, we pause. A conclusion is yet to be written.

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